808 Main Ave. / Nitro, W. Va. 25143 / (304) 755-8228

ACKENHEIL & ASSOCIATES

CONSULTING ENGINEERS

West Virginia, Inc.

December 1, 1979

Monsanto Industrial Chemicals Nitro, West Virginia 25143

Attention:

Gentlemen:

Subject:

Soil Testing Services Report

Dated November 15, 1979

Monsanto Nitro Plant Landfill

Nitro, West Virginia Nitro Project No. 79169N

In accordance with your request we present for your information additional data and conclusions concerning permeability tests presented in the subject report.

I. DATA

- The three (3) soil permeability test samples were compacted to 80% of the maximum dry density at the maximum water content as determined by ASTM D 1557. Modified Proctor compaction curves were presented on Dwg. Nos. 79169N-9 through 12.
- B. A comparison of plasticity test results and the soil permeability test sample water contents are as follows:

	Soil Type	Soil Moisture Content	Liquid Limit	Plastic Limit	Plastic Index
(Red Brown Poca Clay	18	33 [.]	18	15
CLAY CAP	Cross Lanes Red Brown Clay	22	32	17	15
	Present Landfill	26	27	18	9

Monsanto Industrial Chemicals December 1, 1979 Page -2-



I. DATA (Cont'd)

C. Hydraulic Head and Gradient: The hydraulic head and gradients used in the performance of the constant head permeability tests are listed below. The hydraulic gradient is computed as the hydraulic head divided by the test specimen length.

Soil Type	Hydraulic Head (ft.) H	Hydraulic Gradient H/L
Red Brown Poca Clay	18.5	48.4
Cross Lanes Red Brown Clay	18.5	48.4
Present Landfill	21.25	55.7

D. <u>Degree of Saturation</u>: The degree of saturation of each permeability test sample was approximated using the soil moisture content and by assuming a specific gravity of soil solids of G=2.7. The results of these calculations are as follows:

Soil Type	Degree of Saturation (Percent) Laboratory
Red Brown Poca Clay	84
Cross Lanes Red Brown Clay	91
Present Landfill	91

In general the field density test results indicated a lower degree of saturation in the field than the conditions assumed in the laboratory.

II. CONCLUSIONS

The following conclusions represent our opinion and interpretation of the data contained in this report and generally accepted soil mechanics theory.

- A. <u>Plasticity</u>: The plasticity of a given soil is related to its permeability. In comparing two soils of similar grain size distribution, the soil with the higher plasticity will generally be the more impervious of the two.
- B. Percent Compaction: Our compaction test results on fill and natural soil at the subject landfill indicated a degree of compaction generally above 80% and in several cases above 90%. These test results are included in our Letter Report dated November 15, 1979. The permeability of a given soil will decrease with an increase in the degree of compaction. The amount of this increase will probably vary considerably with each soil type.

II. CONCLUSIONS (Cont'd)

- C. Hydraulic Gradient: The permeability of clayey soils is related to the hydraulic gradient applied to the soil. If the hydraulic gradient is lowered the permeability of a clay soil generally decreases. In fact, at very low gradients, clay soils become virtually impermeable. In a typical field example, a 2 ft. thick liner below 10 ft. of water would have a hydraulic gradient of 5. This is approximately 1/10 of the hydraulic gradient used in the laboratory for the performance of the permeability test.
- D. Degree of Saturation: The degree of saturation of a given field sample or test specimen is related to the permeability of the specimen. In general soils compacted to the same density will probably have lower permeabilities at low degrees of saturation than samples with high degrees of saturation. This relationship would probably not be true with very low degrees of saturations. As indicated in Item 4 of the Data Obtained, the degrees of saturation for the samples tested in the laboratory were higher than indicated by our field compaction tests.
- E. Overall Permeability: The permeability of a layer of clay soil or a clay liner fill could be greatly increased if cracks, holes or other discontinuities exist within the soil layer. These discontinuities obviously would not be revealed with a permeability test.
- F. <u>Testing:</u> Due to the variability of soil types additional laboratory and <u>field</u> soil tests should be performed to more thoroughly substantiate conclusions presented in this Letter Report.

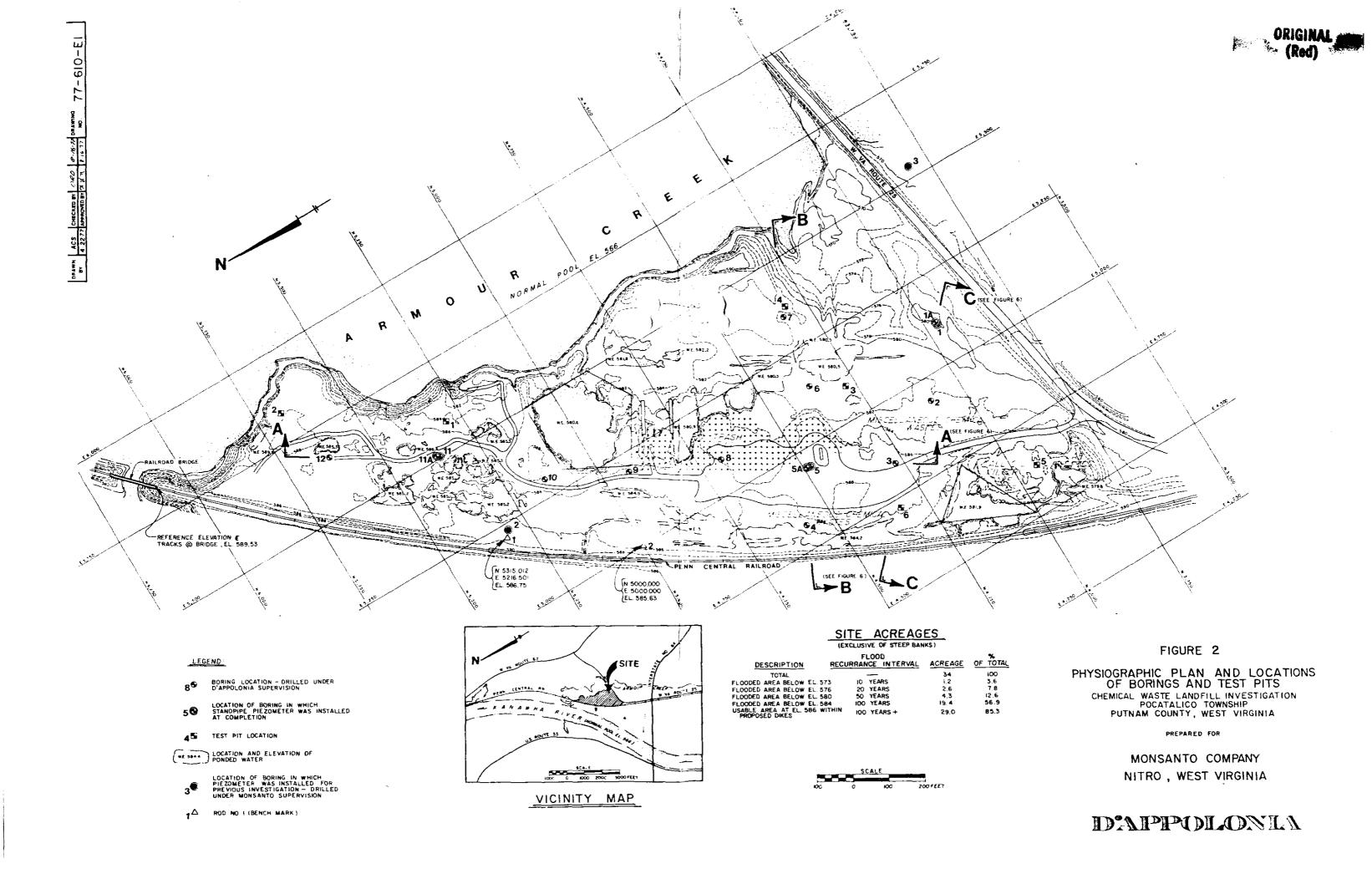
If you have any questions concerning this Letter Report, please contact us.

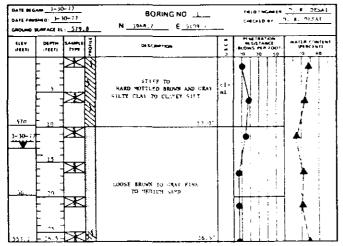
We appreciate the opportunity to serve you.

Very truly yours,

ACKENHEIL & ASSOCIATES WEST VIRGINIA, INC.







BOTTOM OF BOILD

NOTE: STANDPROF PLEZOMSTER TIP AT 16-1000 DEPTH. SEE SEPARATE HANGING FOR PLEZOMSTER LISTALLATION

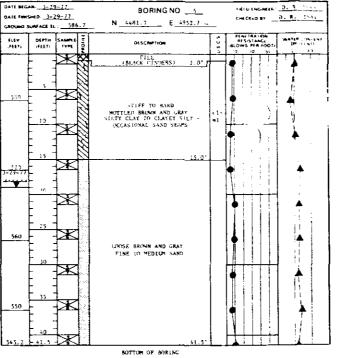
DATE FINISHED 1-27-22 GROUND SURFACE EL: 575.8	BORING NO4_ N4574J		FIE-E (NGHMER CHIEFFU	
FLEY DEPTH SAMPLE T	DESCRIPTION	3.1.5	PENS PER LUTTE IBLOWS PER LUTTE ID JO 50	ALTER CONTENTS PERCENTS 40
	(BI '-K TEOLAS 1.01		•	†
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20	14.01	-	$\{$	7
- 2xx	TUNISE BROWN AND GRAY FINE TO MEDILM SAND			

DATE SEGAN: <u>u-1-77</u> DATE SEESHED. <u>4-1-77</u> GROUND SURFACE EL: <u>SSI.7</u>		BORING NO			
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570 17	 X	LODGE GRAY AND BROWN FINE TO		4	∢ │

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9.0"

STANDPIPE PIEZOMETER TIT AT 6-FOUT DEPTH. SEE SEPARATE DRAWING FOR PIEZOHETER INSTALLATION



41.5"

STANDPIPE PLEZOMETER TIP AT 15-POOT DEPTH. SEE SEPARATE DRAWING FOR PIEZOMETER INSTALLATION

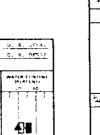
DATE REGAN: 3-28-22 DATE FRESHED: 3-28-27 GROUND SURFACE EL: 585.5	80RING NO	PIELD FRIGHTER: 7 F. DISAT CHECKED BY 1. R CHISAT		
CLEV DEFTH SAMPLE ST	DESCRIPTION:	## PENFIRATION HE TE COVIDED HE TE COVIDED		
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560 23	LOOSE TO MEDIUM DENSE BROWN FINE TO MEDIUM SAND — TRACE OF COAL			

11 5'

DATE MCAR 3-30-77 BORING NO. _______ HEID ENGREES D. E. DESAL ATE FEBRUARD: 3- 10-77 CONCRED BY D. B. HESA! N _-095.B E _-937.1 GROUND SUMMOL (L: 512.8 (SIACK CISDERS) 1.0' [STIFF TO HARD MUTTLED SAINW AND CHAY SILTY CLAY TO CLAYEY SILT

DATE REGAN: 3-14-77 DATE RORSHED S-24-77 GROWND SUMFACE ELL S-2-3		<u>+21</u>	BORING NO. 5-A N 4491.1 E 4953.9		CHECKED ST. D. R. DESAT		
ELEV IFET:	DEPTH IFeEIL	suffic 7	DESCRIPTION	200	PENETHATION RESISTANCE ISLAND PER FOOT, NO. 123	WATER COSTIN	
Sec. a	- · -	<u>'</u>	(FIX SUBSIDENT F PROFILE, STE MESTER IN 5)			43	

DETAILS.



DATE (MINNEY 1-18-12

-24

GATE MICAN _- 1-77 .

HEFT TIME

-XX

BORING NO

(BLACK CINTERS) 1.9' f

BORING NO. ____

STEEP TO HARD MOTTLED BRING AND CRAY S.LTY

STIPP TO THE BOTTO B BRING AND GRAY STOTE CLAY TO CLAYPY STUTE FOR INTERNAL SIND TRANSPORT

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED SOIL CONDITIONS AND WATER LEVELS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS OCCURRING AT THESE BORING LOCATIONS ALSO THE PASSAGE OF TIME MAY RESULT IN A

THE DEPTH AND THICKNESS OF THE SUBSURFACE STRATA INDICATED ON THE SECTIONS WERE GENERALIZED FROM AND INTERPOLATED BETWEEN THE TEST BORINGS INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE TEST BORINGS AND IT IS POSSIBLE THAT SUBSURFACE CONDITIONS BETWEEN THE TEST BORINGS MAY VARY FROM THOSE INDICATED.

CANADA PARAMA

Section 1.

Transferration 12 12 2000

NOTE .

- I, FOR PLAN AND LOCATION OF BORINGS. SEE FIGURE 2 .
- 2. FOR GENERAL NOTES AND LEGEND SEE FIGURE 4.

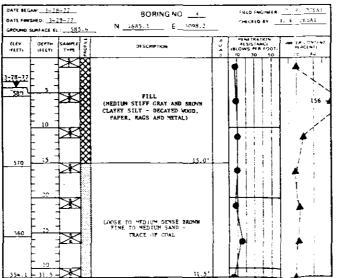
FIGURE 3

BORING LOGS | THROUGH 9 CHEMICAL WASTE LANDFILL INVESTIGATION POCATALICO TOWNSHIP PUTNAM COUNTY, WEST VIRGINIA

PREPARED FOR

MONSANTO COMPANY NITRO , WEST VIRGINIA

DAPPOLONIA



BORING NO. _____ DATE THUSHED 1-10-11 N 1920.5 E 3291.1 ACLAND SURFACE EL: _________ STIFF TO HARD MOTTLED BROWN AND GRAY SILTY CLAY CLAYEY SILT — OCCASIONA! SAND SEAMS SOTTOM OF BORING

11.5

77-610-E4

DRAWH TRS CHECKED BY CACO G-16-72 ORAWING BY 3-2-77 APPROVED BY 71, 8-16-77 NO.

DATE BEGINS 3-31-77 DATE HINSHED 3-31-77 DROUND BURNACE EL 587.5	BDRING NO	CHECKED BY D. R. DESA
ELEN DEPTH SAMPLE DE	DESCRIPTION	PENETRATION WATER CONTENT IN IRESISTANCE PROFIT PRINCEST IN 18 LOWS PER FOOT PRINCEST 1 C 30 50 20 46
380		5 K 20 3C 20 4C
Y X		
30 30 35 35 35 35 35 35 35 35 35 35 35 35 35	LOUSE TO MEDIUM DENSE BROWN AND CHAY FIRE TO MEDIUM SAND	
340 536.0 - 51.5	43.0° NEDIUS DENNE GRAY FIVE TO HEDIUM SAGT - SOME GRAVEL 51.5°	

| DATE PRINCIPLE | DATE

BOTTOM OF BORIFG

NOTE: STANDPIPE PIEZOMETER T A" 10-POOT DEPTE. SET SEPARATE DRAFINE FOR PIEZOMETER INSTALLATIO PETAILS.

DATE MEGAN. 3-31-73 DATE FMESHID 3-31-77 GROUND BLANFACE EL: 586.3	BORING NO 12 N 5625.9 E 5658.4	HALD ENGINEER D. K. DESA!
SLEV DEFTIN SAMPLE TO	DESCRIPTION.	M PENETATION MATER CONTENT IN INDION'S PER FOOT: (PERCENT TO 30 50 20 46
570	STIFF TO HARD MOTTLED BROWN AND GRAY SILTY CLAY TO CLAYEY SILT - OCCASIONAL SANO SEAMS	G1-
20	LOOSE SHOWS FIRE TO NEDITH SAND	

BOTTON OF BORTON 26-5"

OTE: STANDPIPE PIEZOMETER TIP AT 49-FOOT DEPTH. SEE SEPARATE DRAWING FOR PIEZOMETER INSTALLATION

LEGEND

2" O.D. SPLIT BARREL SAMPLE NUMBER

75/0.5' PENETRATION REFUSAL RESISTANCE AND FRACTIONAL INCREMENT DRIVEN IN FEET

3-31-77 GROUND WATER LEVEL AND DATE

U.S.C.S UNIFIED SOIL CLASSIFICATION SYSTEM (CAPITAL LETTERS
INDICATE LAB TEST CLASSIFICATION, LOWER CASE LETTERS
INDICATE VISUAL FIELD CLASSIFICATION)

Grove

SAMPLE NUMBER

3" UNDISTURBED SAMPLE (SHELBY TUBE)

RECOVERY INCHES

PLASTIC LIMIT (PL)

ATTERBERG LIMITS

LIQUID LIMIT (LL)

LOCATION OF UNDISTURBED SHELBY TUBE SAMPLE AS SHOWN ON SECTIONS.

LOCATION OF STANDPIPE PIEZOMETER AS SHOWN ON SECTIONS.

CONSISTENCY OF CONFINED COMPRESSIVE
STRENGTH TONS BYP SQUARE FOOT
VERY SOFT

VERY SOFT

C.25 TF C.50

MEDIUM STIFF

D.50 TC C.

STIFF

LO T. 20

VERY STIFF

LO T. 20

HARE

MORE HARE

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SOIL CONDITIONS AND WATES LEVELS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS OCCURRING AT THESE BORING LOCATIONS. ALSO THE PASSAGE OF TIME MAY RESULT IN A CHANGE IN THE CONDITIONS AT THESE BORING LOCATIONS.

GENERAL NOTES

DEMONTOR	GRAMULAR SORS
DESIGNATION	BLOWS PER FOOT
VERY LOOSE	0.4
LOOSE	5.10
MEDIUM DENSE	11 30
DENSE	31 50
VERY DENSE	OVER SO

STANDARD PENETHATION RESISTANCE IS THE NUMBER OF BLOWS REQUIRED TO DRIVE A 2 INCH O D SPLIT BARREL SAMPLER 12 INCHES USING A 140 POUND HAMMER FALLING FREELY THROUGH 30 INCHES. THE SAMPLER WAS DRIVEN 18 INCHES AND THE NUMBER OF BLOWS RECORDED FOR EACH 6 INCH INTERVALL THE RESISTANCE TO PENETHATION IS INDICATED ON THE ORAWING AS BLOWS PER FOOT.

THE DEPTH AND THICKNESS OF THE SUBSURFACE STRATA MOICATED ON THE SECTIONS WERE GENERALIZED FROM AND MTERPOLATED BETWEEN THE TEST BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE TEST BORINGS AND IT IS POSSIBLE THAT SUBSURFACE CONDITIONS BETWEEN THE TEST BORINGS MAY VARY FROM THOSE MOICATED.

NOTE:

I. FOR PLAN AND LOCATION OF BORINGS, SEE FIGURE 2.

FIGURE 4

BORING LOGS 10 THROUGH 12 & GENERAL NOTES AND LEGEND CHEMICAL WASTE LANDFILL INVESTIGATION POCATALICO TOWNSHIP PUTNAM COUNTY, WEST VIRGINIA

PREPARED FOR

MONSANTO COMPANY NITRO, WEST VIRGINIA

A DEAL TO THE PROPERTY

DATE MICHAEL 1937

DATE MICHAEL 1937

TEST PIT NO. 1

FALD INCHES. J. R. DESAL

CHACFLURY D. R. DESAL

DESCRIPTION

TEST PIT DIMENSION

(15' x 2.5')

STIPP TO HARD MOTTLED

BROWN AND CRAY SILTY CLAY TO CLAYEY SILT - OCCASIONAL

SAND SEAMS

10.0052 BRINN FINE TO

WESTERN FAND

13.5'

LOOSE BRINN FINE TO

WESTERN FAND

14.0'

BOTTOM OF TEST PIT

NOTES:

SOIL SAMPLE COLLECTED FROM

7 Wateril 104 L-79-77

DATE REGAN: 4-1-77 DATE RIMISHED: 6-1-77 GROUND SURFACE EL: 583			TEST PIT NO _4	CHELLEGURY D. R. DESAL	
ELEV SEET,	DEPTH PROFILE		DESCRIPTION	Tr WARES	
580	5		STIFF TO RARD MOTTLED BRUMN AND GRAY SILTY CLAY TO CLAYEY SILT - OCCASIONAL SAND SEAMS	TEST PIT DIMENSION (15' x 2.5')	
575 573.0	10.0	777777	LOOSE BROWN FINE TO MEDIUM SAND		

BOTTON OF 1EST PIT

TE: PAINFALL ON 3-29-77.

DATE SEGAL: 1-31-77 OATE FRISHED: 3-31-77 GROUND SURFACE EL: 587			TEST PIT NO. 2 8 -5,6-0 E -5,630	INCOMENSATION D. R. DESAL		
ELEV FEETI	24 * 7H -F€€T)	MOFEL	Of the Averticinal	HI MAN		
580	5		STLYF TO HARD MOTTLED SSOWER AND GRAY SILTY CLAY TO CLAYEY SILT - OCCASIONAL SAND YEARS	TEST PIT DIRECTION (15' x 2.5')		
572.2	15.0		LOOSE BOOM FINE TO MEDIAN SAND 14.0	<u> </u>		
			S: 1. OUZING WATER AT TS-FOOT DEPTH.			
			2. SOIL SAME ? SOLLECTED FRUM. 2 TO 8 FEST OF DEPTH.			

ATE BEGAN ATE FINISHED: ROUND SURFA		TEST PIT NO. 5 N 3,910 E -4,620	FRIDINGMER D. R. DESAL CHECFELOU D. R. DESAL		
	PTH PROFILE	DEp_RIPTION			
580	,	STUL (CHEMINAL HASTE) STUTY TO HARD MOTTLED BROWN AND HAY SILIT CLAY TO CLAYET S'LT	TEST PIT DIMENSION (15' x 2.5')		

3. RASHFALL N 3-29-77.

BOTTOM OF TEST PLT

1.01 . HOTE: EAGSTALL ON 3-29-77.

AFR FRE	AM <u>}-)1-</u> IMEO: <u>}-</u>] RAWACE BL	11-77	TEST PIT NO 3	CHARLES D. R. DESAL		
ELEV :FEET:	DEPTM 1PEETS	MOFILE	ОЕЗСТИТИТ	H _c WAPICS		
580				TEST PIT DIMENSION (15' x 2.5')		
575	5		STIFF TO HARD MOTTLED BROWN AND GRAY SILTY CLAY TO CLAYEY SILT - UCCASIONAL SAND YEARS			
570.0	11.0		LOSSE BROWN FINE TO MEDIUM SAND 11-0'			

BOTTOM OF TEST FIT

NOTE: MAINFALL ON 3-29-77.

DATE FREE	ья: <u>4-1-</u> / рнео. <u>3-1</u> риврасе ек	-77	TEST PIT NO6_ N6,320 E4,720	CHECKLERY D. R. DESAL		
ELEY 1FEET1	DEPTH FELTI	OVA-1	DESCHALLION	TE MARIE S		
			(CHENICAL MASTE) FILL	TEST PIT OLMENSION (15' x 2.5')		
580 579 0	. ,		STIFF TO HARD HUTTLED BROWN AND GRAY SILTY CLAY TO CLAYEY SILT-OCCASIONAL SAND SEARS 7 1			

NOTE: RAINFALL OF 3-29-27.

THE TEST PIT LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SOIL CONDITIONS AND WATER LEVELS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS OCCURRING AT THESE TEST PIT LOCATIONS. ALSO THE PASSAGE OF TIME MAY RESULT IN A CHANGE IN THE CONDITIONS AT THESE TEST PIT LOCATIONS.

NOTE

I FOR PLAN AND LOCATION OF TEST PITS, SEE FIGURE 2.

2 FOR GENERAL NOTES AND LEGEND, SEE FIGURE 4.

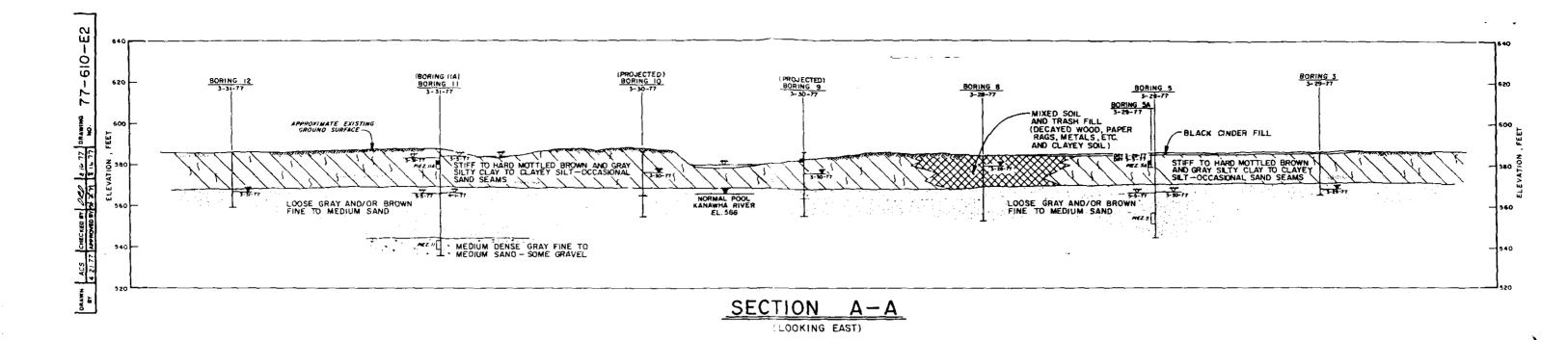
FIGURE 5

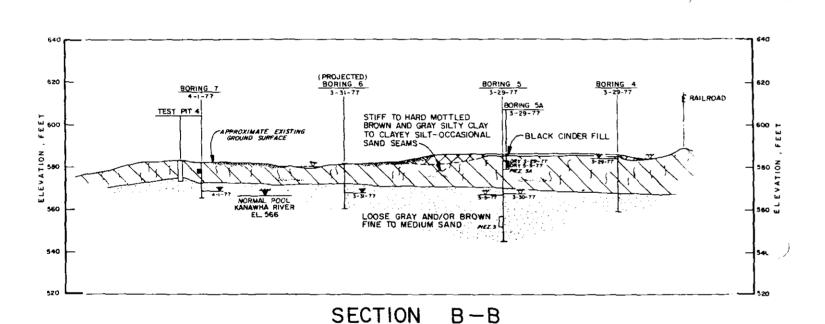
TEST PIT LOGS I THROUGH 6
CHEMICAL WASTE LANDFILL INVESTIGATION
POCATALICO TOWNSHIP
PUTNAM COUNTY, WEST VIRGINIA

PREPARED FOR

MONSANTO COMPANY NITRO, WEST VIRGINIA

D'APPOLONL'A





(LOOKING SOUTH)

NOTES

- OGS AND HELATED INFORMATION

 INFACE CONDITIONS ONLY AT

 LOCATIONS AND DATES INDICATED.

 DIS AND WATER LEVELS AT
 - FOR GENERAL NOTES AND LEGEND SEE FIGURE 4.
 - 3. FOR DETAILED DESCRIPTION OF BORINGS AND TEST PITS SEE FIGURES 3 ,4 AND 5

80RING 2
3-30-77
BLACK CINDER FILL
STIFF TO HARD MOTTLED
BORING 1
3-30-77
BLACK CINDER FILL
STIFF TO HARD MOTTLED
BORING 1
3-30-77
BROWN AND GRAY SILTY CLAY
TO CLAYEY SILT-OCCASIONAL
SAND SEAMS
COMPLETE OF THE TOTAL STAND OF THE TOTAL STAND OF THE TOTAL STAND SEAMS
COMPLETE OF THE TOTAL STAND OF THE TOTAL STAND OF THE TOTAL SEAMS
SAND
SECTION C-C

(LOOKING SOUTHWEST)

SHELBY TUBE SAMPLE

PIEZOMETER SENSING ZONE

WATER LEVEL IN BORING
UPON COMPLETION OF DRILLING
DATE OF OBSERVATION

WATER LEVEL IN PIEZOMETER
3-1-77
DATE OF OBSERVATION

LEGENO

90 0 50 120 FEET

VERTICAL SCALE

20 0 20 40 FEET

FIGURE 6

SUBSURFACE PROFILES-SECTIONS A-A, B-B AND C-C CHEMICAL WASTE LANDFILL INVESTIGATION POCATALICO TOWNSHIP PUTNAM COUNTY, WEST VIRGINIA

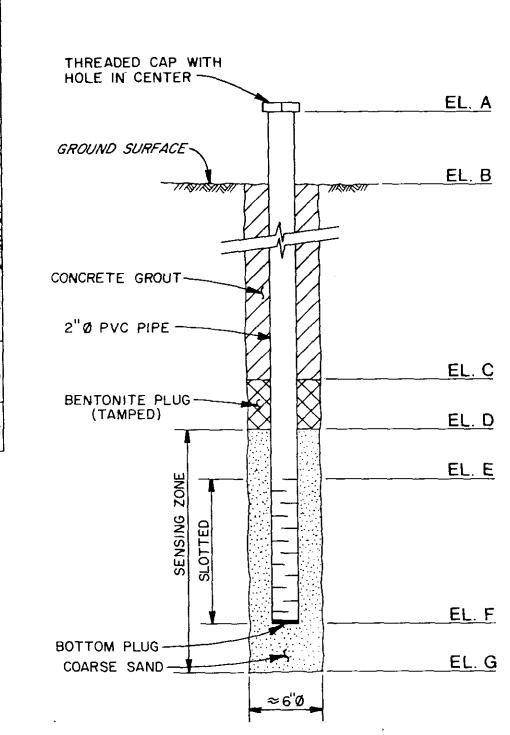
PREPARED FOR

MONSANTO COMPANY NITRO, WEST VIRGINIA

DAPPOLONIA

NOTES:

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- 2. THE DEPTH AND THICKNESS OF THE SUBSURFACE STRATA INDICATED ON THE SECTIONS WERE GENERALIZED FROM AND INTERPOLATED BETWEEN THE TEST BORINGS. INFORMATION ON ACTUAL SUBSURFACE COMOTIONS EXISTS ONLY AT THE LOCATION OF THE TEST BORINGS AND IT IS POSSIBLE THAT SUBSURFACE CONDITIONS BETWEEN THE TEST BORINGS MAY VARY FROM THOSE INDICATED.



16.17 NUMBER 77-610-BI

TYPICAL STANDPIPE PIEZOMETER INSTALLATION

N.T.S.

PIEZOMETER BORING	DATE	ELEVATIONS						
NO.	INSTALLED	Α	В	С	D	E	F	G
ı	3-30-77	582.8	579.8	562.8	560.8	558.8	553.8	553,3
IA	3-30-77	583.7	580.2	579.2	578.2	577.2	574.2	574.2
) 5	3-29-77	589.7	586.7	560.7	558.7	556.7	551.7	545.2
5Δ	3-29-77	590.5	587.0	586.0	584.0	583.0	580.0	580.0
11	3 - 31 -77	590.5	587.5	547.0	545.0	543.0	538.5	536.0
IIA	3-31-77	591.5	588.0	584.0	582.0	581.0	578.0	578.0

NOTES:

- 1. FOR PLAN AND LOCATION OF BORINGS, SEE FIGURE 2.
- 2. FOR SUBSURFACE PROFILE, SEE INDIVIDUAL BORING LOGS.

FIGURE 7

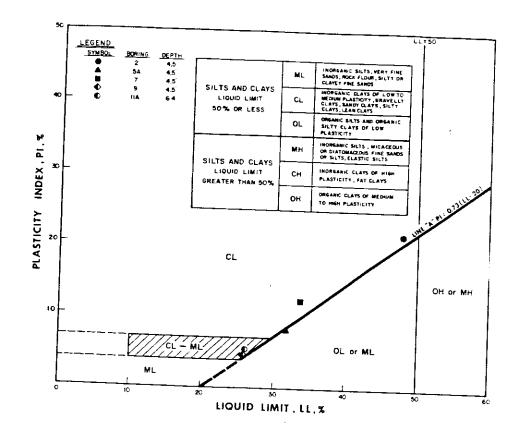
DETAILS OF PIEZOMETER INSTALLATIONS

CHEMICAL WASTE LANDFILL INVESTIGATION
POCATALICO TOWNSHIP
PUTNAM COUNTY, WEST VIRGINIA
PREPARED FOR

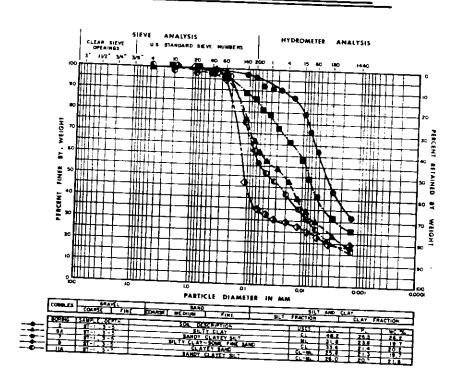
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MONSANTO COMPANY NITRO, WEST VIRGINIA

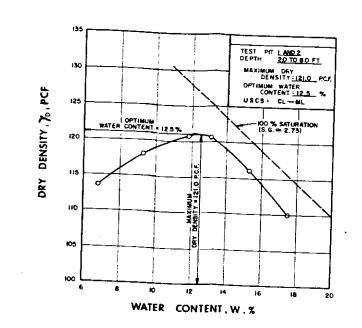
DAMPHONE LEGIT



PLASTICITY CHART



GRAIN SIZE DISTRIBUTIONS



METHODE MATERIAL SIZE	MOLD SIZE	BLOWS*	ASTM SESIGNATION BID MODIFIED
B ALL PASSING #4	4 DIA	25	ASIM MANAGED I
ALL PASSING 3/4	4 DIA		514NCARE-D498 55#/1/ 3
			1 and 1 ft 2 pres 10 th 1 th

COMPACTION TEST RESULTS

NOTES

- i. FOR PLAN AND LOCATION OF BORINGS AND TEST PITS, SEE FIGURE 2.
- 2. FOR DETAILED DESCRIPTION OF BORINGS AND TEST PITS, SEE FIGURES 3, 4

FIGURE 8

LABORATORY TEST RESULTS
SHEET I OF 2
CHEMICAL WASTE LANDFILL INVESTIGATION
POCATALICO TOWNSHIP
PUTNAM COUNTY, WEST VIRGINIA

PREPARED FOR

MONSANTO COMPANY NITRO, WEST VIRGINIA

DAPPOI ONI